

FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE  
INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

Sheet 1 of 4

ATTORNEY DOCKET NO.

7784-000707

SERIAL NO.

10/821,454

APPLICANT

Changzhou Wang

FILING DATE

04/09/2004

GROUP

unknown

**U.S. PATENT DOCUMENTS**

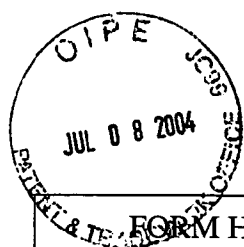
| Ref. Desig. | Examiner's Initials | Document Number | Date          | Name                | Class/ Subclass | (If appropriate) Filing Date |
|-------------|---------------------|-----------------|---------------|---------------------|-----------------|------------------------------|
| 1.          |                     | 6,539,373       | Mar. 25, 2003 | Guha                | 707/3           | May 11, 2000                 |
| 2.          |                     | 6,526,405       | Feb. 25, 2003 | Mannila, et al.     | 707/6           | Dec. 17, 1999                |
| 3.          |                     | 6,516,288       | Feb. 4, 2003  | Bagne               | 702/179         | Oct. 10, 2001                |
| 4.          |                     | 6,496,817       | Dec. 17, 2002 | Whang, et al.       | 707/2           | Apr. 27, 2000                |
| 5.          |                     | 6,473,757       | Oct. 29, 2002 | Garofalakis, et al. | 707/6           | Mar. 28, 2000                |
| 6.          |                     | 6,385,608       | May 7, 2002   | Mitsuishi, et al.   | 707/6           | Nov. 5, 1998                 |
| 7.          |                     | 6,317,700       | Nov. 13, 2001 | Bagne               | 702/181         | Dec. 22, 1999                |
| 8.          |                     | 6,292,802       | Sep. 18, 2001 | Kessenich, et al.   | 707/101         | May 9, 2000                  |
| 9.          |                     | 6,272,478       | Aug. 7, 2001  | Obata, et al.       | 706/12          | Dec. 31, 1997                |
| 10.         |                     | 6,236,982       | May 22, 2001  | Mahajan, et al.     | 706/45          | Sep. 14, 1998                |
| 11.         |                     | 6,230,151       | May 8, 2001   | Agrawal, et al.     | 706/12          | Apr. 16, 1998                |
| 12.         |                     | 6,212,525       | Apr. 3, 2001  | Guha                | 707/101         | Feb. 24, 1999                |
| 13.         |                     | 6,189,005       | Feb 13, 2001  | Chakrabarti, et al. | 707/6           | Aug. 21, 1998                |
| 14.         |                     | 6,185,559       | Feb. 6, 2001  | Brin, et al.        | 707/6           | May 9, 1997                  |
| 15.         |                     | 6,138,117       | Oct. 24, 2000 | Bayardo             | 707/6           | Apr. 29, 1998                |
| 16.         |                     | 6,105,032       | Aug. 15, 2000 | Bunda, et al.       | 707/101         | Jun. 5, 1998                 |
| 17.         |                     | 6,094,645       | Jul. 25, 2000 | Aggarwal, et al.    | 706/47          | Nov. 21, 1997                |
| 18.         |                     | 6,092,065       | Jul. 18, 2000 | Floratos, et al.    | 707/6           | Feb. 13, 1998                |
| 19.         |                     | 6,061,682       | May 9, 2000   | Agrawal, et al.     | 707/6           | Aug. 12, 1997                |
| 20.         |                     | 6,055,538       | Apr. 25, 2000 | Kessenich, et al.   | 707/101         | Dec. 22, 1997                |
| 21.         |                     | 5,983,224       | Nov. 9, 1999  | Singh, et al.       | 707/6           | Oct. 31, 1997                |

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE INDICATED OTHERWISE (02/25/2008)



FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE**  
**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

Sheet 2 of 4

ATTORNEY DOCKET NO.

7784-000707/US

SERIAL NO.

10/821,454

APPLICANT

Changzhou Wang

FILING DATE

4/9/2001

GROUP

unknown

**U.S. PATENT DOCUMENTS**

| Ref. Desig. | Examiner's Initials | Document Number | Date          | Name            | Class/ Subclass | (If appropriate) Filing Date |
|-------------|---------------------|-----------------|---------------|-----------------|-----------------|------------------------------|
| 22.         |                     | 5,897,637       | Apr. 27, 1999 | Guha            | 707/101         | Mar. 7, 1997                 |
| 23.         |                     | 5,742,811       | Apr. 21, 1998 | Agrawal, et al. | 395/606         | Oct. 10, 1995                |

**FOREIGN PATENT DOCUMENTS**

| Ref. Desig. | Examiner's Initials | Document Number | Date | Country | Class/ Subclass | Translation Yes | No |
|-------------|---------------------|-----------------|------|---------|-----------------|-----------------|----|
|             |                     |                 |      |         |                 |                 |    |

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

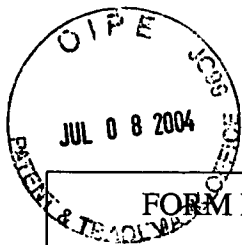
| Ref. Desig. | Examiner's Initials |  |
|-------------|---------------------|--|
| 1.          |                     | Agrawal, Rakesh, et al., <i>Mining Sequential Patterns</i> , ELEVENTH INTERNATIONAL CONFERENCE ON DATA ENGINEERING, Taipei, Taiwan, 1995, IEEE Computer Society Press.   |
| 2.          |                     | Gusfield, Dan, <i>Algorithms on Strings, Trees, and Sequences</i> , COMPUTER SCIENCE AND COMPUTATIONAL BIOLOGY, 1997   |
| 3.          |                     | Han, Jiawei, et al., <i>Scalable Frequent-Pattern Mining Methods: An Overview</i> , KDD TUTORIAL NOTES, 2001, August 26-29, 2001, San Francisco, CA., Cambridge University Press,. See <a href="http://www.cs.sfu.ca/~peijian/personal/publications/kdd01.tutorial.zip">http://www.cs.sfu.ca/~peijian/personal/publications/kdd01.tutorial.zip</a> |
| 4.          |                     | Han, Jiawei, et al., <i>Mining Frequent Patterns without Candidate Generation</i> , PROCEEDINGS ON INTERNATIONAL CONFERENCE ON MANAGEMENT OF DATA 2000 (SIGMOD'00).  |
| 5.          |                     | Joshi, Mahesh et al., <i>A Universal Formulation of Sequential Patterns</i> , TECHNICAL REPORT NUMBER 99-21, May 20, 1999, Department of Computer Science, University of Minnesota, Minneapolis.   |
| 6.          |                     | Leung, Carson Kai-Sang, et al., <i>OSSM: A Segmentation Approach to Optimize Frequency Counting</i> , 18 <sup>TH</sup> INTERNATIONAL CONFERENCE ON DATA ENGINEERING 2000, February 26 – March 1 2002, San Jose, California.  |

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JH/ (02/25/2008)



FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE  
INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

Sheet 3 of 4

ATTORNEY DOCKET NO.

7784-000707/US

SERIAL NO.

10/821,454

APPLICANT

Changzhou Wang

FILING DATE

4/9/2001

GROUP

unknown

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

| Ref. Desig. | Examiner's Initials |   |
|-------------|---------------------|---|
| 7.          |                     | Mannila, Heikki, et al., <i>Discovering Generalized Episodes Using Minimal Occurrences</i> . In KDD, pgs. 146-151, 1996. See <a href="http://citeseer.ist.psu.edu/cache/papers/cs/931/http:zSzzSzpegasus.ece.utexas.edu/rse/Szee380lzS">http://citeseer.ist.psu.edu/cache/papers/cs/931/http:zSzzSzpegasus.ece.utexas.edu/rse/Szee380lzS</a>  |
| 8.          |                     | Mannila, Heikki, et al., <i>Discovering Frequent Episodes in Sequences</i> . KDD TUTORIAL NOTES, pgs. 210-215, 1995. See <a href="http://citeseer.ist.psu.edu/cache/papers/cs/6623/http:zSzzSzcs.chungbuk.ac.kr/Sz-csgraduzSzreferencessz">http://citeseer.ist.psu.edu/cache/papers/cs/6623/http:zSzzSzcs.chungbuk.ac.kr/Sz-csgraduzSzreferencessz</a>  |
| 9.          |                     | Mannila, Heikki, et al., <i>Discovery of Frequent Episodes in Event Sequences</i> , <i>Data Mining &amp; Knowledge</i> , TECHNICAL REPORT C-1997-15, Department of Computer Science, University of Helsinki, Finland, Series of Publications C, February 26, 1997.  |
| 10.         |                     | Pei, Jian, et al., <i>PrefixSpan: Mining Sequential Patterns Efficiently by Prefix-Projected Pattern Growth</i> , 17 <sup>TH</sup> INTERNATIONAL CONFERENCE ON DATA ENGINEERING, April 2-6, 2001, pgs. 215-224. See <a href="http://citeseer.nj.nec.com/cache/papers/cs/27046/http:zSzzSzwww-faculty.cs.uiuc.edu/hanjzSzpdfzSzspan01.pdf/pei01prefixspan/pdf">http://citeseer.nj.nec.com/cache/papers/cs/27046/http:zSzzSzwww-faculty.cs.uiuc.edu/hanjzSzpdfzSzspan01.pdf/pei01prefixspan/pdf</a> . |
| 11.         |                     | Pei, Jian, et al., <i>Mining Sequential Patterns with Constraints in Large Databases</i> , 11 <sup>TH</sup> INTERNATIONAL CONFERENCE ON INFORMATION AND KNOWLEDGE MANAGEMENT, pgs. 18-25, November 4-9, 2002, McLean, Virginia.   |
| 12.         |                     | Roddick, John F. et al., <i>A Survey of Temporal Knowledge Discovery Paradigms and Methods</i> , IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, Vol 14. No. 4, 2002 pgs. 750-767.   |
| 13.         |                     | Srikant, Ramakrishnan, et al., <i>Mining Sequential Patterns: Generalizations and Performance Improvements</i> , 5TH INT'L CONFERENCE ON EXTENDING DATABASE TECHNOLOGY (EDBT), Avignon, France, 1996.   |
| 14.         |                     | Thomas, Shiby, et al., <i>Mining Generalized Association Rules and Sequential Patterns Using SQL Queries</i> , FOURTH INTERNATIONAL CONFERENCE ON KNOWLEDGE DISCOVERY AND DATA MINING, pgs. 344-348, 1998.  |
| 15.         |                     | Yang, Jiong, et al., <i>Mining Long Sequential Patterns in a Noisy Environment</i> , PROCEEDINGS OF THE ACM SIGMOD INTERNATIONAL CONFERENCE ON MANAGEMENT OF DATA, pgs. 406-417, June 3-6, 2002.  |

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JH/ (02/25/2008)

|  |                     |            |
|--|---------------------|------------|
| <p>FORM HDP-1449 (Based on Form PTO-1449)</p> <p><b>PATENT AND TRADEMARK OFFICE</b></p> <p><b>INFORMATION DISCLOSURE CITATION</b></p> <p>(Use several sheets if necessary)</p> <p>Sheet 4 of 4</p> | ATTORNEY DOCKET No. | SERIAL No. |
|  | 7784-000707/US      | 10/821,454 |
|  | APPLICANT           |            |
|  | Changzhou Wang      |            |
|  | FILING DATE         | GROUP      |
|  | 4/9/2001            | unknown    |

| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) |                     |   |
|--|---------------------|---|
| Ref. Desig.  | Examiner's Initials |   |
| 16.  |                     | Zaki, Mohammed J., <i>SPADE: An Efficient Algorithm for Mining Frequent Sequences</i> , MACHINE LEARNING, Vol. 42, No. 1, pgs. 31-60, 2001. |

|                                      |                  |
|--------------------------------------|------------------|
| Examiner: /Joseph Hirl/ (02/25/2008) | Date Considered: |
|--------------------------------------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JH/ (02/25/2008)